



NORLITE, LLC

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January 29, 2014

Ms. Nancy Baker
Deputy Regional Permit Administrator
New York State Department of Environmental Conservation
Region 4
1130 North Westcott Road
Schenectady, NY 12306-2014

RETURN RECEIPT REQUESTED VIA EMAIL

Mr. Kenneth Eng
Air Compliance Branch
United States Environmental Protection Agency
Region 2
290 Broadway
New York, NY 10007-1866

RETURN RECEIPT REQUESTED VIA EMAIL

Re: Norlite Corporation-MACT Excessive Exceedances Report
Kiln 1: 01/13/14 – 01/29/14
Kiln 2: 01/13/14 – 01/29/14

Dear Sir/Madam:

In accordance with 40 CFR 63.1206(c)(3)(vi), the Norlite, LLC (Norlite) is submitting an "Excessive Exceedance Report" for the timeframe of 01/13/14 thru 01/29/14. The attached document explains each of the "malfunctions" for Kilns One and Two.

The results of the investigation concluded a majority of the waste feed cutoffs were a result of the span limit associated with the stack gas flow monitor. The majority of the stack gas cutoffs were attributed to either water vapor in the stack condensing from the extreme cold and wind blowing out of the North and West or water droplets contacting the stack gas probe from the Mist Pad plugging. The condensed water vapor droplets contacted the stack gas probe causing it to fault. Attempts were made to adjust the ID fan speed to combat the droplet formation without significant success. To combat the Mist Pad issues, operators must rinse the Mist Pad periodically which places additional water into the scrubber and stack systems. As has been stated previously, Norlite has been working with the Department to approve the Optical Flow Sensor Technology for measuring flow rate in the kiln system. On January 22, 2014, Norlite and the Department had one more conversation regarding the optical flow sensor technology. The result of the discussion was that Norlite will be preparing and submitting a permit modification request for Departments consideration within the next week. The permit modification will make the optical flow sensor the official unit for measuring kiln exhaust flow rate.

Norlite has been working help resolve stack gas span cutoffs in general for almost two years. Norlite has been working with the Department to install a new optical flow technology to monitor stack gas flow rate. A test unit has been installed on Kiln 1 and tested to obtain additional information to be used in future calculations. Norlite conducted an official RATA test on the optical flow sensor in Kiln 1 on November 26, 2013 which yielded very good results. The final RATA Testing report has been received by Norlite and submitted along with a proposal for implementing official use of the unit to the Department on December 24, 2013. Norlite will be preparing and submitting a permit modification request for Department approval by February 07, 2014. After final approval is given for the unit on Kiln 1, Norlite will install a unit on Kiln



NORLITE, LLC

2 with an expedited schedule for completion which will hopefully see the unit in certified operation by the end of March 2014.

Norlite has also been working with the Department to improve LGF delivery and handling at the kilns to address these types of cutoffs. In April 2013, the Department conditionally approved Norlite's plan to remove the minimum LLGF Line Pressure requirement, allow a positive displacement pump to be used for fuel flow control, and allow the use of a recirculation line for use during times when off LGF. The Department also requested a six month study be conducted without a minimum LLGF Line Pressure requirement. The study was started on May 01, 2103 and completed on October 31, 2013. Norlite conducted an extensive search for a positive displacement pump which would allow variable speed control, have tight pump tolerance, and have suitable reliability for long term use. The results of the six month study which summarized over 4 million lines of operational data between the two kilns was submitted to the DEC on December 5, 2013. Based from the results of the six month study, Norlite feels the data supports the removal of the minimum LLGF Line Pressure requirement. Norlite has concluded that a positive displacement pump which meets all the needed criteria does not exist. As stated previously, Norlite has acquired the assistance of a process engineering firm to assist in the search for a suitable positive displacement pump and conduct an overall review of the entire kiln feed system to provide a proposal for improving the kiln fuel feed system. The process engineering firm has been supplied with facility drawings, had several discussions with Norlite personnel, and taken a facility tour to better understand the facility operations as they relate to fuel delivery at the kilns. Norlite submitted a proposal provided by SPEC Engineering to the Department on December 31, 2013 for review and approval. The proposal was to use an automated control loop to control pressures and fuel flow rates at the kilns. On January 13, 2014, the Department approved the overall concept of the proposal with the requirement that additional engineering specifications be provided by certain dates for ultimate approval of the entire project.

All of the malfunctions that occurred were consistent with our Startup, Shutdown and Malfunction Plan (SSMP). As approved by the NYSDEC on February 6, 2006, these reports are being sent electronically.

Should you have any questions regarding this letter, please contact me at (518) 235-0401 or email at: tom.vanvranken@tradebe.com.

Sincerely,

Thomas Van Vranken

Thomas Van Vranken
Environmental Manager

Attachments

ecc: Don Spencer, NYDEC – R4 w/attachments
James Lansing, NYSDEC – CO w/attachments
Joseph Hadersbeck, NYSDEC – R4w/attachments
Jim Quinn, NYSDEC – R4 w/attachments
Tita LaGrimas – Tradebe



NORLITE, LLC
MACT EXCEEDANCE REPORT - KILN 1
01/13/14 - 01/29/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
1/14/2014	8:01:31	1/14/2014	8:01:55	0:00:24	16	Malfunction	The Concentration of the Soda Ash Had Been Increased to Prevent Freezing Which Caused the Instantaneous Upper Instrument Setpoint to be Reached for Scrubber pH Span	Scrubber pH	Span	The Concentration of the Soda Ash Was Decreased After the Second Cutoff Occurred
1/23/2014	11:50:12	1/23/2014	11:50:34	0:00:22	17	Malfunction	The Concentration of the Soda Ash Had Been Increased to Prevent Freezing Which Caused the Instantaneous Upper Instrument Setpoint to be Reached for Scrubber pH Span	Scrubber pH	Span	The Concentration of the Soda Ash Was Decreased After the Second Cutoff Occurred



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MACT EXCEEDANCE REPORT - KILN 2
01/13/14 - 01/29/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
1/17/2014	10:02:43	1/17/2014	10:22:30	0:19:47	52	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The Mist Pad Rinse Water Flow Rate Was Decreased
1/17/2014	10:25:08	1/17/2014	10:26:00	0:00:52	53	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The Mist Pad Rinse Water Flow Rate Was Decreased
1/17/2014	10:44:56	1/17/2014	11:06:04	0:21:08	54	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The Mist Pad Rinse Water Flow Rate Was Decreased
1/18/2014	12:39:11	1/18/2014	12:39:37	0:00:26	55	Malfunction	After Washing Out the Mist Pad, Extra Water In the System Caused A Sudden Increase in the Flow Rate Which Caused the Instantaneous Upper Instrument Setpoint to be Reached for Scrubber Recirc. Rate Span	Scrubber Recirc. Rate	Span	Increased the Blowdown Flow Rate to Help Remove Water From the System
1/18/2014	17:25:17	1/18/2014	19:24:15	1:58:58	56	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to the Mist Pad Being Plugged and Excess Water Contacting the Stack Gas Probe	Stack Gas Flow Rate	Span	I & E Cleaned Probe and the Mist Pad Was Rinsed
1/19/2014	18:03:20	1/19/2014	18:13:19	0:09:59	57	Malfunction	Operators Where Controlling Flow Rate with Valves Which Allowed A Flow Rate Surge to Occur Which Caused the Instantaneous Upper Instrument Setpoint to be Reached for LGF Flow Span	LGF Flow	Span	The Department Has Approved the Concept for the Installation of A More Automated Fuel Delivery System At the Kilns
1/20/2014	16:05:18	1/20/2014	18:10:28	2:05:10	58	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to the Mist Pad Being Plugged and Excess Water Contacting the Stack Gas Probe	Stack Gas Flow Rate	Span	I & E Cleaned Probe and the Mist Pad Was Rinsed
1/20/2014	19:08:05	1/20/2014	20:33:57	1:25:52	59	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to the Mist Pad Being Plugged and Excess Water Contacting the Stack Gas Probe	Stack Gas Flow Rate	Span	I & E Cleaned Probe and the Mist Pad Was Rinsed
1/21/2014	12:51:46	1/21/2014	13:06:49	0:15:03	60	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Water Droplets From the Mist Pad Hitting the Probe	Stack Gas Flow Rate	Span	The ID Fan Speed Was Decreased the Help Prevent Water Droplets From Hitting the Probe
1/21/2014	22:53:23	1/21/2014	22:53:48	0:00:25	61	Malfunction	After Washing Out the Mist Pad, Extra Water In the System Caused A Sudden Increase in the Flow Rate Which Caused the Instantaneous Upper Instrument Setpoint to be Reached for Scrubber Recirc. Rate Span	Scrubber Recirc. Rate	Span	Increased the Blowdown Flow Rate to Help Remove Water From the System
1/22/2014	2:07:35	1/22/2014	5:14:16	3:06:41	62	Malfunction	Instantaneous Upper Instrument Setpoint Was Reached for Venturi D.P. Span Due to the MMV Throat Plugging Up With Soda Ash Solids	Venturi D.P.	Span	The MMV Rinse Water Was Increased to Clear the Throat
1/22/2014	5:27:55	1/22/2014	5:31:22	0:03:27	63	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Extreme Cold And Wind Out of the North Causing the Water Vapor In the Stack to Condense and Contact the Stack Gas Probe Causing it to Fault	Stack Gas Flow Rate	Span	The Kiln Was Switched to Oil and ID Fan Adjustments Made To Try To Combat The Cold Temperatures



NORLITE, LLC
MACT EXCEEDANCE REPORT - KILN 2
01/13/14 - 01/29/14

Start Date	Start Time	End Date	End Time	Downtime	#	Event	Cause	Parameter	Limit	Corrective Action
1/22/2014	5:35:59	1/22/2014	6:11:12	0:35:13	64	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Extreme Cold And Wind Out of the North Causing the Water Vapor In the Stack to Condense and Contact the Stack Gas Probe Causing it to Fault	Stack Gas Flow Rate	Span	The Kiln Was Switched to Oil and ID Fan Adjustments Made To Try To Combat The Cold Temperatures
1/22/2014	7:08:02	1/22/2014	8:24:04	1:16:02	65	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Extreme Cold And Wind Out of the North Causing the Water Vapor In the Stack to Condense and Contact the Stack Gas Probe Causing it to Fault	Stack Gas Flow Rate	Span	The Kiln Was Switched to Oil and ID Fan Adjustments Made To Try To Combat The Cold Temperatures
1/22/2014	8:29:07	1/22/2014	10:00:24	1:31:17	66	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Extreme Cold And Wind Out of the North Causing the Water Vapor In the Stack to Condense and Contact the Stack Gas Probe Causing it to Fault	Stack Gas Flow Rate	Span	The Kiln Was Switched to Oil and ID Fan Adjustments Made To Try To Combat The Cold Temperatures
1/22/2014	10:31:23	1/22/2014	10:49:05	0:17:42	67	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Extreme Cold And Wind Out of the North Causing the Water Vapor In the Stack to Condense and Contact the Stack Gas Probe Causing it to Fault	Stack Gas Flow Rate	Span	The Kiln Was Switched to Oil and ID Fan Adjustments Made To Try To Combat The Cold Temperatures
1/22/2014	11:28:09	1/22/2014	11:32:09	0:04:00	68	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Extreme Cold And Wind Out of the North Causing the Water Vapor In the Stack to Condense and Contact the Stack Gas Probe Causing it to Fault	Stack Gas Flow Rate	Span	The Kiln Was Switched to Oil and ID Fan Adjustments Made To Try To Combat The Cold Temperatures
1/22/2014	11:37:38	1/22/2014	12:20:28	0:42:50	69	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Extreme Cold And Wind Out of the North Causing the Water Vapor In the Stack to Condense and Contact the Stack Gas Probe Causing it to Fault	Stack Gas Flow Rate	Span	The Kiln Was Switched to Oil and ID Fan Adjustments Made To Try To Combat The Cold Temperatures
1/22/2014	12:23:43	1/22/2014	16:32:49	4:09:06	70	Malfunction	Instantaneous Upper Instrument Setpoint Reached for Stack Gas Span Due to Extreme Cold And Wind Out of the North Causing the Water Vapor In the Stack to Condense and Contact the Stack Gas Probe Causing it to Fault	Stack Gas Flow Rate	Span	The Kiln Was Switched to Oil and ID Fan Adjustments Made To Try To Combat The Cold Temperatures
1/22/2014	16:58:14	1/22/2014	17:02:03	0:03:49	71	Malfunction	After Washing Out the Mist Pad, Extra Water In the System Caused A Sudden Increase in the Flow Rate Which Caused the Instantaneous Upper Instrument Setpoint to be Reached for Scrubber Recirc. Rate Span	Scrubber Recirc. Rate	Span	Increased the Blowdown Flow Rate to Help Remove Water From the System
1/25/2014	4:02:05	1/25/2014	5:05:50	1:03:45	72	Malfunction	After A Tank Switch, the LGF Pump Surged Which Caused A Flow Rate Surge Resulting In A CO Spike	Carbon Monoxide	Opl	The Kiln Was Switched to Oil Until the HRA Cleared
1/28/2014	12:10:56	1/28/2014	12:15:28	0:04:32	73	Malfunction	After Washing Out the Mist Pad, Extra Water In the System Caused A Sudden Increase in the Flow Rate Which Caused the Instantaneous Upper Instrument Setpoint to be Reached for Scrubber Recirc. Rate Span	Scrubber Recirc. Rate	Span	Increased the Blowdown Flow Rate to Help Remove Water From the System